

LISTING OF CLAIMS

1. (Previously presented) Method for reprocessing used plastic containers, including PET bottles, comprising the steps:
 - a) analyzing (102, 202) the degree of contamination of the plastic,
 - b) determining (106, 221, 223) decontamination process parameters as a function of the degree of contamination found in the analyzing step, and
 - c) conducting controlled decontamination (112) of the plastic according to the decontamination process parameters thus determined.
2. (Previously presented) Method according to Claim 1, wherein in the analyzing step, contaminants present in the plastic and their respective concentrations are determined.
3. (Previously presented) Method according to Claim 2, wherein the contaminants detected are combined into contaminant groups.
4. (Previously presented) Method according to Claim 1, wherein in step b) a process temperature adapted to the degree of contamination is determined as a decontamination process parameter.
5. (Previously presented) Method according to Claim 1, wherein in step b) a process time that is adapted to the degree of contamination is determined as a decontamination process parameter.
6. (Previously presented) Method according to Claim 2, wherein in step b) the degree of contamination of the plastic is determined by adding up the concentrations of one of the contaminants or the contaminant groups detected.
7. (Previously presented) Method according to Claim 6, wherein the individual contaminants or contaminant groups are assigned a weighting factor as a function of an intensity of contamination corresponding to that contaminant or contaminant group, and the

degree of contamination is obtained from the weighted sum of the concentrations of the contaminants or contaminant groups detected.

8. (Previously presented) Method according to Claim 2, wherein in step b) the decontamination process parameters are determined as a function of the concentrations of a predetermined number of contaminants or contaminant groups.

9. (Previously presented) Method according to Claim 2, wherein in step b), the decontamination process parameters are determined independently of one another for at least two of the contaminants or contaminant groups detected, and in step c) the decontamination process parameters for which the profile of decontamination requirements is highest are used.

10. (Previously presented) Method according to Claim 1, wherein in step b) the decontamination process parameters are determined as a function of reusable threshold values (SW1, SW2).

11. (Previously presented) Method according to Claim 10, wherein step c) is performed only when the degree of contamination exceeds a predetermined first threshold value (SW1).

12. (Previously presented) Method according to Claim 10, wherein the plastic is re-shredded (111) between steps b) and c) if the degree of contamination exceeds a predetermined second threshold value (SW2).

13. (Previously presented) Method according to Claim 10, wherein instead of steps b) and c), the plastic is sorted out and removed (105) when the degree of contamination exceeds a predetermined third threshold value (SW3).

14. (Previously presented) Method according to Claim 1, wherein in step b) the decontamination process parameters are determined (107) with the help of a numerical model and the degree of contamination is a parameter of the model.

15. (Previously presented) Method according to Claim 1, wherein in step b) the decontamination process parameters are determined by comparing the degree of contamination with a predetermined data record.

16. (Previously presented) Method according to Claim 1, wherein between steps a) and b), the plastic is added to one of at least two partial quantities as a function of the degree of contamination, and in step b), decontamination process parameters are determined (221, 223) for each of the at least two partial quantities, and in step c), the decontamination is performed (222, 224) for each of the partial quantities according to the decontamination process parameters thus determined.

17. (Previously presented) Method according to Claim 1, wherein the degree of contamination of the decontaminated plastic is determined and the value thus determined is optionally used to adjust the decontamination process parameters.

18. (Withdrawn) Device for reprocessing used plastic containers comprising:
a system (305) for analyzing the degree of contamination of the plastic,
a system (306) for determining decontamination process parameters as a function of the degree of contamination thus detected, and
a system (307) for controlled decontamination of the plastic according to the decontamination process parameters thus determined.

19. (Withdrawn) Device according to Claim 18, wherein the system (305) for performing the analysis comprises a mass spectrometer.

20. (Withdrawn) Device according to Claim 19, wherein the mass spectrometer is configured so that the degree of contamination is determined essentially in real time.

21. (Previously presented) Method according to Claim 9, wherein the decontamination process parameters are determined independently of one another for all of the contaminant or contaminant groups detected.